

SECTION III: REMARKS

A. Summary of Amendments to the Claims

By the present amendment, claims 1, 4, 5, 17, and 21 have been amended, and dependent claims 22 and 23 have been added. Claims 9-10 and 12 were cancelled previously. No excess claim fees are due herewith, since upon entry of new dependent claims 22 and 23, the total number of claims does not exceed twenty.

The amendments to claims 1 and 4 are supported by the specification, for example, at pages 2, 3, and 4.

The amendments to claim 5 are supported by the specification, for example, at pages 4-5.

The amendments to claims 17 and 21 are supported by the specification, for example, at page 5.

New claim 22 is supported by the specification, for example, at page 4 and Fig. 1.

New claim 23 is supported by the specification, for example, at pages 1 and 4-5, and Fig. 2.

No new matter within the meaning of 35 U.S.C. 132 has been introduced by the foregoing amendments.

B. Acknowledgement of Allowable Subject Matter

In the May 11, 2009 Office Action at page 4 thereof, the examiner indicated that “[c]laims 1-8 [and] 11 are allowable over the prior art of record and claims 1-5 would be allowed once amended to overcome the 35 U.S.C. 101 rejection . . .”

The Office Action did not specifically identify any rejections with respect to claims 6, 7, and 11. It is therefore assumed that the indication of rejected status of such claims in the Office Action Summary (page 1) is erroneous, and that such claims in the such claims are allowable over the cited art.

C. Request for Correction of Title of Application

In an Amendment filed on December 22, 2004, Applicant amended the specification to update the title of the application to recite “SINUSOIDAL CODING INCLUDING A PHASE JITTER PARAMETER” with the foregoing underlined text reflected the updated portion of the title. The online file record (e.g., via the Patent Application Information Retrieval system) continues to indicate the original title of the application (namely, “SINUSOIDAL CODING”). Please update the online file record for the present application to reflect the title as amended on December 22, 2004.

D. Response to Claim Rejections Under 35 U.S.C. 101

In the May 11, 2009 Office Action, claims 1-5 were rejected under 35 U.S.C. 101 as being allegedly directed to non-statutory subject matter. In response to such rejection, independent claims 1 and 5 have been amended herewith to affirmatively recite utilization of an encoding device (i.e., in claim 1) and utilization of a decoding device (i.e., in claim 5) to perform specific method steps. Amended claims 1 and 5 (together with claims 2-4, which depend from claim 1¹) therefore positively recite structure associated with the statutory category of machines (devices), providing a first basis for withdrawal of the claim rejections under 35 U.S.C. 101.

Accordingly, withdrawal of the rejections of claims 1-5 under 35 U.S.C. 101 is warranted, and is respectfully requested.

E. Response to Claim Rejections Under 35 U.S.C. 102

In the May 11, 2009 Office Action, claims 13-21 were rejected under 35 U.S.C. 102(e) as being allegedly anticipated by U.S. Patent No. 6,475,245 to Gersho et al. (“Gersho”).

¹ Dependent claims inherently include all the features of the claims on which they depend, pursuant to 35 U.S.C. 112, fourth paragraph.

1. Law Regarding Anticipation

“Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration.” *W.L. Gore & Assocs. v. Garlock*, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). It is not enough that the prior art reference disclose all the claimed elements in isolation. Rather, “**anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.**” *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (emphasis added); *see also Glaverbel Societe Anonyme v. Northlake Marketing & Supply Inc.*, 33 USPQ2d 1496, 1498 (Fed. Cir. 1995) (“Anticipation ... requires identity of invention: the claimed invention, as described in appropriately construed claims, must be the same as that of the reference, in order to anticipate.”)

The standard for anticipation is not satisfied where the prior art reference merely discloses the “concept,” “essence,” “key,” or “gist” of the patented invention, as “concepts do not anticipate.” *Panduit Corp. v. Dennison Mfg. Co.*, 774 F.2d 1082, 1101 (Fed. Cir. 1985). Anticipation cannot be predicated on teachings in a references that are vague or based on conjecture. *Datascope Corp. v SMEC, Inc.*, 776 F.2d 320 (Fed. Cir. 1985).

An allegation that a prior art reference anticipates a patent claim cannot be based on sections of a reference taken in isolation; rather “**the cited sections must be read in context.**” *In re Chmiel and O’Leary*, 262 F.2d 81, 120 USPQ 188, 190 (C.C.P.A. 1958) (emphasis added). This is consistent with the pronouncement of the Federal Circuit that “[t]he well established rule of law is that **each prior art reference must be evaluated as an entirety, and that all of the prior art must be evaluated as a whole.**” *Panduit Corp. v. Dennison Mfg. Co.*, 774 F.2d 1082, 227 USPQ 337, 344 (Fed. Cir. 1985) (emphasis added).

2. *The Rejections of Claims 13-21 Should be Withdrawn Because Gersho Fails to Teach All Elements of Such Claims*

Gersho relates to a method and apparatus for hybrid coding of speech having phase alignment between mode-switched frames. Gersho discloses encoding of speech that provides a determination of frequency and amplitude information. The frequency and amplitude information is transmitted through a multiplexer (element 48 in Figure 4A) and a de-multiplexer (element 102 in Figure 5). Gersho states the following at col. 14, lines 59-67:

Since **no phase information is sent** from the encoder to the decoder, phase synchronization is based solely on the reconstructed speech (at the decoder) and the reconstructed speed and the original speech (at the encoder). ... The decoder uses the estimated linear phase for the reconstruction of the speech

The examiner has conceded that Gersho fails to disclose transmission of phase information². In order to avoid transmission of phase information, “onset synchronization is performed at the speech decoder” (col. 16, lines 5-7) and then the initial linear phase “propagates from the first frame of the harmonic segment to the following frames by the phase evolution described in Equation (4) or Equation (6).

Gersho states at col. 15, lines 20-22 that “initial linear phase of the harmonic segment, theta.0., is required to provide signal continuity **but additional bits would be needed for its transmission**. In other words, Gersho teaches away from even transmitting an initial linear phase of a harmonic segment due to the requirement of additional bits. A key word search of Gersho reveals use of the word “jitter” at col. 19, line 11; however, this “jitter” refers to classification jitter in a **neural network** – NOT a “jitter parameter associated with the at least one sinusoidal component” as recited in independent claims

² It is noted that in the November 16, 2005 Office Action at page 3 thereof, the examiner stated:

“Although Gersho et al. discusses transmitting parameters that are used to recalculate the phase information (col. 15, line 50 – col. 16, line 10), [Gersho’s] transmitted parameters themselves, although directly used to recalculate the phase, **are not explicit phase parameters per se.**” (Emphasis added.)

13³, 17⁴, and 18⁵. Gersho's "jitter" bears no relation to the phase jitter parameter recited in Applicant's claims.

Applicant's independent claim 13 requires, *inter alia*, "a multiplexer that is configured to provide an output that includes sinusoidal parameters that represent the frequency and amplitude information and a phase jitter parameter that represents an amount of phase jitter that should be added during restoring the sinusoidal component from the transmitted sinusoidal parameters." Nothing in Gersho discloses any element configured to provide such an output.

Applicant's independent claim 17 requires, *inter alia*, "a receiver that is configured to receive an encoded signal that includes sinusoidal parameters representing frequency and amplitude information of at least one sinusoidal component of a sound recording, and at least one phase jitter parameter associated with the at least one sinusoidal component; [and] a synthesizer that is configured to restore the at least one sinusoidal component from the sinusoidal parameters, and to adjust the at least one sinusoidal component based on the at least one phase jitter parameter to yield at least one adjusted sinusoidal component." Nothing in Gersho discloses a receiver configured to receive at least one phase jitter parameter associated with the at least one sinusoidal component, or a synthesizer configured to adjust the at least one sinusoidal component based on the at least one phase jitter parameter to yield at least one adjusted sinusoidal component.

Applicant's independent claim 18 requires, *inter alia*, a computer-readable medium that ... causes a processor to "determine frequency and amplitude information of at least one sinusoidal component in the signal, and at least one phase jitter parameter associated with the at least one sinusoidal component, and provide an output that includes sinusoidal parameters that represent the frequency and amplitude information and a phase

³ Gersho also fails to disclose "a phase jitter parameter that represents an amount of phase jitter that should be added during restoring the sinusoidal component from the transmitted sinusoidal parameters" as recited in Applicant's claim 13.

⁴ Gersho also fails to disclose "a synthesizer that is configured to restore the at least one sinusoidal component from the sinusoidal parameters, and to adjust the at least one sinusoidal component based on the at least one phase jitter parameter to yield at least one adjusted sinusoidal component" as recited in Applicant's claim 17.

⁵ Gersho also fails to disclose "a phase jitter parameter that represents an amount of phase jitter that should be added during restoring the sinusoidal component from the transmitted sinusoidal parameters" as recited in Applicant's claim 18.

jitter parameter that represents an amount of phase jitter that should be added during restoring the sinusoidal component from the transmitted sinusoidal parameters.” Nothing in Gersho discloses providing provide an output that includes sinusoidal parameters that represent the frequency and amplitude information and a phase jitter parameter that represents an amount of phase jitter that should be added during restoring the sinusoidal component from the transmitted sinusoidal parameters.

For at least the foregoing reasons, independent claims 13, 17, and 18 are patentably distinguished over Gersho. Since dependent claims inherently include the features of the claims on which they depend (see 35 U.S.C. 112, fourth paragraph), the claims depending (whether directly or indirectly) from any of claims 13, 17, or 18 are likewise patentably distinguished over Gersho. Accordingly, withdrawal of the rejections of claims 13-21 is warranted, and is respectfully requested.

3. *The Rejections of Claims 13-21 Should be Withdrawn Because The Examiner Has Already Conceded That the Cited Art Fails to Disclose Applicant's Claim Recitations Pertaining to Transmission of Phase Jitter Parameters*

In the Office Action dated June 22, 2007 at page 3 thereof, the examiner stated:

“Claims 1-8, 11, 12 are allowable over the prior art of record (and would be allowed once amended to overcome the 35 U.S.C. 101 rejections stated above. ... As per the independent claims [1, 5, 6, 7, and 12], the **claim recitations pertaining to the transmission of phase jitter parameters**, along with the other elements as claimed, is [sic, *are*] **not explicitly taught by the prior art of record**.”

It is noted that U.S. Patent No. 6,475,245 to Gersho et al. (“Gersho”) was specifically discussed by the examiner in numerous prior rejections under 35 U.S.C. 102 and 35 U.S.C. 103, such that the foregoing statement of the examiner confirming allowability of claims 1-8, 11, and 12 must be construed to mean that such claims are allowable over Gersho.

Claims 13-21 include three independent claims, namely, claims 13, 17, and 18, which are similar in character to previously-allowed claims 6, 7, and 1, respectively, and each expressly recite “**at least one phase jitter parameter.**” Similarity between rejected independent claims 13, 17, and 18 and previously allowed claims

Independent claim as previously allowed	Similar independent claim as presently rejected
<p>6. An audio coder device comprising:</p> <p>means for determining frequency and amplitude information of at least one sinusoidal component in the signal;</p> <p>means for transmitting sinusoidal parameters representing the frequency and amplitude information;</p> <p>and</p> <p>means for transmitting a phase jitter parameter representing an amount of phase jitter that should be added during restoring the sinusoidal component from the transmitted sinusoidal parameters.</p>	<p>13. An audio coder device comprising:</p> <p>a coding unit that is configured to determine frequency and amplitude information of at least one sinusoidal component in a sound signal and at least one phase jitter parameter associated with the at least one sinusoidal component; and</p> <p>a multiplexer that is configured to provide an output that includes sinusoidal parameters that represent the frequency and amplitude information and a phase jitter parameter that represents an amount of phase jitter that should be added during restoring the sinusoidal component from the transmitted sinusoidal parameters.</p>
<p>7. An audio player device comprising:</p> <p>means for receiving an encoded signal representative of a sound recording, the encoded signal including sinusoidal parameters representing frequency and amplitude information of at least one sinusoidal component;</p> <p>means for restoring the at least one sinusoidal component from the sinusoidal parameters;</p> <p>means for receiving a phase jitter parameter; and</p> <p>means for adding an amount of phase jitter to the sinusoidal component, which amount of phase jitter is derived from the phase jitter parameter.</p>	<p>17. An audio player device comprising:</p> <p>a receiver that is configured to receive an encoded signal that includes sinusoidal parameters representing frequency and amplitude information of at least one sinusoidal component of a sound recording, and at least one phase jitter parameter associated with the at least one sinusoidal component;</p> <p>a synthesizer that is configured to restore the at least one sinusoidal component from the sinusoidal parameters, and to adjust the at least one sinusoidal component based on the at least one phase jitter parameter to yield at least one adjusted sinusoidal component; and</p> <p>an output unit that is configured to provide an output that includes the at least one <u>adjusted sinusoidal component</u>.</p>

Independent claim as previously allowed	Similar independent claim as presently rejected
<p>1. A method of encoding a signal for execution by an encoding device, the method comprising:</p> <p style="padding-left: 20px;">determining frequency and amplitude information of at least one sinusoidal component in the signal;</p> <p style="padding-left: 20px;">transmitting sinusoidal parameters representing the frequency and amplitude information; and</p> <p style="padding-left: 20px;">transmitting a phase jitter parameter representing an amount of phase jitter that should be added during restoring the sinusoidal component from the transmitted sinusoidal parameters.</p>	<p>18. A computer-readable medium encoded with a computer program that, when executed by a processor, causes the processor to:</p> <p style="padding-left: 20px;">determine frequency and amplitude information of at least one sinusoidal component in the signal, and at least one phase jitter parameter associated with the at least one sinusoidal component, and</p> <p style="padding-left: 20px;">provide an output that includes sinusoidal parameters that represent the frequency and amplitude information and a phase jitter parameter that represents an amount of phase jitter that should be added during restoring the sinusoidal component from the transmitted sinusoidal parameters</p>

In the preceding table, bolded text denotes corresponding features of claims 6 and 13, claims 7 and 17, and claims 1 and 18, respectively. Independent claims 13, 17, and 18 are patentably distinguished over the cited art for at least the reason that the cited art fails to disclose the phase jitter parameter features of these claims. The examiner has expressly indicated that claims 6, 7, and 1 are allowable over the art due to their inclusion of “claim recitations pertaining to the transmission of phase jitter parameters.” The examiner further conceded the similarity between claim 18-21 and claims 13, 14-17 at page 6 of the May 11, 2009 Office Action, stating that claims 18-21 “are similar in scope and content to the device claims 13, 15-17” Due to the similarity conceded by the examiner between claims 18-21 relative to claims 13, 15-17, and the further similarity between claims 13, 17, and 18 relative to claims 6, 7, and 1 (all containing similar language pertaining to transmission of phase jitter parameters), the rejections of claims 13, 17, and 18 are not justified. That is, claims 13, 17, and 18 are allowable over the cited art for at least the same arguments previously made of record in connection with claims 6, 7, and 1, and such arguments are hereby incorporated by reference with respect to claims 13, 17, and 18.

For at least the foregoing reasons, independent claims 13, 17, and 18 are patentably distinguished over Gersho. Since dependent claims inherently include the

features of the claims on which they depend (see 35 U.S.C. 112, fourth paragraph), the claims depending (whether directly or indirectly) from any of claims 13, 17, or 18 are likewise patentably distinguished over Gersho. Accordingly, withdrawal of the rejections of claims 13-21 is warranted, and is respectfully requested.

CONCLUSION

In light of the foregoing, Applicants respectfully submit that all of the now-pending claims are in condition for allowance. Examination of the enclosed claims and issuance of a notice of allowance are earnestly solicited. Should any issues remain that may be amenable to telephonic resolution, the examiner is invited to telephone the undersigned attorneys to resolve such issues as expeditiously as possible.

In the event there are any errors with respect to the fees for this response or any other papers related to this response, the Director is hereby given permission to charge any shortages and credit any overcharges of any fees required for this submission to Deposit Account No. 14-1270.

Respectfully submitted,

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